

# IMAGES

NEWS

PROPERTIES

NATURE

HISTORY

EVENTS





# IMAGES

The mission of the Boulder County Parks & Open Space Department is to conserve natural, cultural and agricultural resources and provide public uses that reflect sound resource management and community values.

## PHOTOGRAPHS & ILLUSTRATIONS

Cover photo: Great Blue Heron, Michael Lohr  
Peck Garden, Carrie Cimo  
E-bike, Pascale Fried  
County Fair, Melissa Arnold

## NATURE DETECTIVES

Katherine Young and Deborah Price  
Illustrations, Carol Tuttle

## CALENDAR OF EVENTS

Larry Colbenson, Jim Drew, and Sheryl Kippen

## PRINTING

Boulder County Printing Department

## EDITORS

Rachel Gehr and Pascale Fried  
*Suggestions and comments are welcome.*  
*Please contact us at 303-678-6201 or*  
*pfried@bouldercounty.org. Non-credited articles*  
*are by the editors.*

## RECEIVE IMAGES ONLINE OR IN PRINT

*Images is a quarterly publication.*

In print: Subscriptions are free to Boulder County residents or \$6 annually. Contact us at [swilliams@bouldercounty.org](mailto:swilliams@bouldercounty.org) or 303-678-6222.

Online: Go to [www.BoulderCountyOpenSpace.org/images](http://www.BoulderCountyOpenSpace.org/images) and enter your email address in the space provided. You will receive only four emails per year with the issue of Images.

NOTE: To stop receiving the printed version, send an email to [swilliams@bouldercounty.org](mailto:swilliams@bouldercounty.org).



Volume 41, number 2

# Land Conservation Awards



Members of the Crocs team at work on the Nighthawk Trail at Hall Ranch Open Space

On April 18, the Boulder County Parks & Open Space Department (BCPOS) held the annual Land Conservation Awards ceremony. Here are highlights from the special gathering.

The **Partnership Award** recognizes alliances with businesses and organizations around the county to foster a community-based stewardship ethic for the preservation and care of open space. Crocs welcomed this award for outstanding contribution to projects at Heil Valley Ranch. Their energetic and hard work ethic consistently delivered high quality results. In their first year of partnership, the Crocs team participated in four projects at Heil Valley Ranch with 61 volunteers. Their initiative continues into 2019 as they were the first partner group to contact the department to set up projects for the coming year.

The **Land Conservation Award** honors individuals, families, and organizations whose contributions demonstrate notable achievements in preserving Boulder County's agricultural lands. Elizabeth Black received this award for her dedication to Boulder County agriculture. Over the past decade, Black has been an advocate for the Ditch Project and the Citizen Science Soil Health Project which provides annual soil health testing and education, and promotes broader adoption of practices to improve soil health. Black has secured numerous sponsors, such as Colorado Carbon Fund and Longmont Conservation District, and received a Farmer/Rancher Western SARE grant to cover the first three years of expenses. The community impact of this project cannot be overstated. Increasing soil health and sequestering carbon while maintaining the financial stability of producers is a huge challenge.

The **Environmental Stewardship Award** recognizes individuals, families or organizations that make significant contributions in land



protection and/or management. The recipient this year is Janet George for 31 years of collaboration on wildlife management in the region. George strikes the balance between the needs of species and their habitats, and the humans that live and work among them. Whether counting bighorn sheep in sub-zero weather, darting deer to take off unneeded radio collars, organizing and counting great blue heron colonies, or wrangling deer and elk in traps, George has been committed to helping Colorado's and Boulder County's wildlife for a long time.

The **Outstanding Volunteer Award** honors individuals whose leadership and support of the Parks & Open Space volunteer programs have enhanced our community partnerships and improved public service. This year, there were three recipients.

Betty Musfeldt received the Outstanding Volunteer Award for her contributions as a cultural history volunteer. As one of the first tour guides, if not the very first, at the Agricultural Heritage Center, Musfeldt has served school children and drop-in visitors, presented educational traveling trunks to the community, developed programs, and gathered articles for Altona School that will open later this year. Since 2001, Musfeldt has led 149 cultural history programs. She also has recruited local historians and encouraged them to assist with program development for Altona

School. Musfeldt builds rapport with fellow volunteers and staff, old and new and has contributed to many improvements to the department's cultural history program.

Claudia Thiem and Kathleen Andres are the two leads of an outstanding team of volunteers in the Master Gardener program at the Boulder County Jail Garden Project. They coordinate the teams of eight master gardeners who mentor inmates as they plan, plant, and produce the harvest for the jail kitchen. Their efforts extend into bettering our community with the donation of excess produce to local food banks. In addition to coordinating volunteer shifts, crop rotation, and tasks for inmates, these two serve as educational leaders and resource guides for fellow volunteers and inmates alike. Annually, the garden produces over 14,000 pounds of produce. However, the value of their work in the jail garden isn't limited to just food production. Inmates chosen to work in the garden are given the opportunity to connect with nature, take responsibility for the success of the garden project, and literally reap the rewards of their hard work. In some cases, this project inspires inmates to consider further education or careers in green industry. Thiem and Andres inspire their fellow volunteers with their dedication, and the team they lead is truly working to grow the good in Boulder County.



The 2019 Land Conservation Award winners:

Jill Johnson, Chris Aamot, McKenzie Wolf, Claudia Thiem, Katherine Andres, Betty Musfeldt, Elizabeth Black, Elise Jones, Eric Lane, Matt Jones, Deb Gardner, and Janet George

# Frogs: The Other Springtime Singers

Anne Anderson



Chorus frog



Leopard frog

The life zones in Boulder County foster high diversity in wildlife. A spring walk in the evening or a summer walk in the mountains brings a symphony of frog calls as the males congregate in pools to attract the females. This article illustrates the environmental adaptations of two frogs found in Boulder County, the boreal chorus frog and the northern leopard frog. Chorus frogs are less than half the size of the northern leopard frog, which can reach 10 cm, and have quite different skin markings although both can show green to tan coloration that affords great camouflage.

## SURVIVAL STRATEGIES

Frog life cycles are remarkable because of the dramatic changes in form between eggs and adult. Egg clutches are larger, 3,000 to 5,000 per clutch for the leopard frog, compared with 300 for the chorus frog. The northern leopard frog wedges the egg mass underwater between vegetation stalks, whereas chorus frogs deposit only thin strands of a few eggs on the underside of leaves or around submerged stems. The gelatinous eggs deposited by the females, once fertilized, develop into the fish-like tadpole that swims through tail undulations. Oxygen in the water is obtained through the tadpole's gills. The tadpole's food includes algae that grow in the water. These larvae feed so aggressively that they regulate algal blooms, helping maintain water health.

Maturation into an adult involves changes in respiration to include both lung activity and exchange of gases through the skin. Skin moisture is important in this process, and the permeability of the skin is also the way the frog takes in water because frogs do not drink. Adult frogs possess modified teeth-like structures to hold rather than chew or tear their prey. The carnivorous adults prefer insects (mosquitos, yum!) along with earthworms, small minnows, and spiders. Food is caught by the sticky extensible tongue and swallowed whole with inward movement of the large eyes physically forcing the prey into the digestive tract. These eyes located high on the head maximize detection of prey and predators with almost 360 degree visibility. A third eyelid protects the eyes and provides clear vision as they stay open underwater.

The adult northern leopard frog requires three different habitats to complete its life cycle: shallow water for breeding, deep, aerated water that permits overwintering



without freezing, and access to upland with nearby water sources in the summer when travel between 0.3 to 5 kilometers occurs. In contrast, the near-pond site is adequate for the chorus frog throughout its life. Impressively, the chorus frog survives winter by slowing the heart and making antifreeze for its blood to become completely frozen under natural shelters in its pond habitat

## BULLFROG BULLIES

In spite of their adaptations, native frog populations are under challenge by the nonnative bullfrogs, which were imported as food and pets, but have spread into the wild. The larger bullfrog adults include smaller native frogs in their diet; even the bullfrog tadpoles outcompete the natives for their food, the algae. Bullfrogs can also have higher immunity to infections that easily spread to more sensitive frog populations.

In Colorado, the decline in the northern leopard frog populations through the varied factors has resulted in its listing as a Tier 1 Species of Greatest Conservation Need by Colorado Parks and Wildlife. Efforts in Boulder County in the refurbishing of riparian areas impacted by the 2013 flood include landscaping to boost native frog habitat. For instance, Webster Pond at Pella Crossing is redesigned as a native fish refugia with only small native nongame fish, that won't prey on Northern leopard frogs or their egg masses. Keeping the balance of nature to include the native frogs in our landscape clearly is a challenge, but essential so that their chorus can continue to welcome the return of springtime.



## WANT TO LEARN MORE?

Websites, such as [www.soundcloud.com/uottawa-naturewatch](http://www.soundcloud.com/uottawa-naturewatch), aid in distinguishing frogs by their calls.

A video recording at [www.californiaherps.com/noncal/misc/miscfrogs/pages/p.maculata.sounds.html](http://www.californiaherps.com/noncal/misc/miscfrogs/pages/p.maculata.sounds.html) illustrates vocal interactions between male chorus frogs with their metallic clicking calls, as well as the "snoring" call of the northern leopard frog.



Give noxious weeds the brush off and stop invasive species in your tracks.

## GIVE WEEDS THE BRUSH OFF

By Molly Dixon

Boulder County recently installed boot brush stations at trailheads to encourage hikers, volunteers, and Parks & Open Space workers to brush off their boots when entering and exiting trails. The boot brush stations mitigate the spread of invasive and unwanted plant species, while promoting conservation, environmental protection, and biodiversity.

Preventing the spread of noxious weeds from one place to the next is difficult, but it is an easy way to reduce weeds. In Boulder County, cheat grass, common teasel, common mullein, musk thistle, and Dalmatian toadflax are only a few of the most problematic weeds. These plants easily spread their seeds from our hiking boots. Noxious weeds have prolific seed bearing to outcompete plants deer eat, overshadow tree seedlings turkeys feed on, and damage the biodiversity hikers enjoy.

The boot brush stations are located at the trailheads of Ron Stewart Preserve at Rabbit Mountain, Heil Valley Ranch, and Hall Ranch. Boot brushing isn't just for Parks & Open Space trails either.

Invasive plants threaten our backcountry areas as well. Inspecting your clothes and pet's paws and fur also helps stop the spread of invasive seeds. It only takes a few moments to brush your boots and check your clothes and pets to keep our lands diverse and healthy.

# From Volunteer Hands to Public Lands

by Carrie Cimo



The sun sets behind the Flatirons while a soft breeze cools the air. With full seed bags and full hearts, volunteers head back to their cars after a mid-summer night's native seed collection.

This is a common occurrence on Boulder County's public lands during the warmer months. Passionate stewards of local open space lands give their time to harvest native grasses, flowers, berries, and cones so our local restoration projects can be completed with ecotypic (site specific) plant material. In this case, a local ecotype refers to a plant that has adapted to its local environment—the soils, precipitation, climactic extremes, and elevational gradient, among many other factors that have encouraged our plants to thrive through millennia of natural selection.

Our hugely successful native seed collection effort has grown since the late 1990s and continues to grow in popularity and need. Often times though, the scale of restoration on county open space exceeds what we can sustainably harvest from the landscape. We cannot secure the amount of seed that is needed to restore our public lands from wildland collections alone, especially in the wake of a natural disaster like a fire or flood. A larger, more targeted effort was needed to increase our access to and volume of native, ecotypic seed. From this need, the Peck Native Seed Garden was created.

The Peck Garden, located along the LOBO Trail (Longmont to Boulder Trail), was established in 2012 and is on the Peck open space in southwest Longmont. About 12 acres of this property

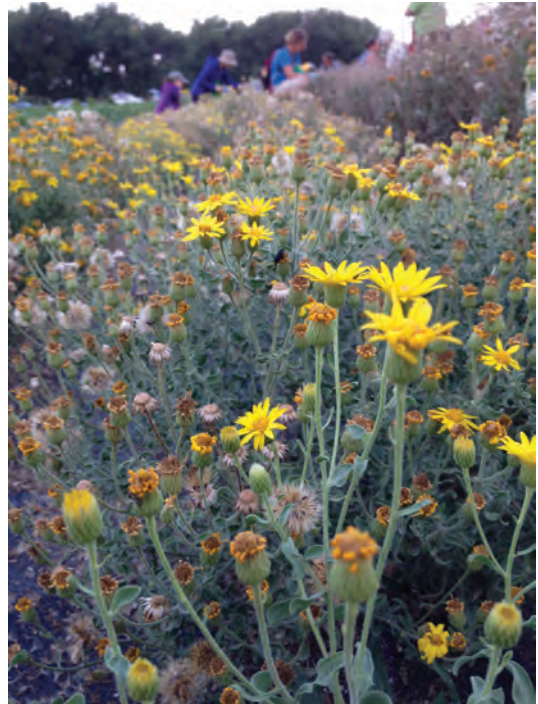
is leased to Ollin Farms, an organic market farm, while about a quarter acre of this farm has been turned into a native seed increase field growing about 10 to 12 different species of native wildflowers and native grasses. All of these species were originally harvested from local open space lands by volunteers. Boulder County Parks & Open Space volunteers and the Boulder County Youth Corps installed these plants at Peck Garden. A small and strong group of volunteers maintains this organic garden. Volunteers harvest the seed and often also help to sow our ecotypic seed back into the landscape. This is a full-circle effort through and through and represents the confluence of community involvement with scientifically supported land management practices.

This in-house seed increase undertaking has vastly improved our restoration efforts. We typically harvest between 100 and 150 pounds of seed annually from the Peck Garden. This garden harvest can account for approximately one-third of all the seed we collect in a year, depending on the species we target and Mother Nature's wildland seed production. By organizing these species into rows, and with irrigation help from Ollin Farms, we can produce large amounts of seed from some of our "work horse" restoration species. These types of plants can establish and persist in the range of soils and elevations found in Boulder County, readily produce viable seed each year, and offer ecosystem services like pollinator forage, wildlife habitat, and soil stabilization. Some of the tried and true work horse species we grow at Peck include (but are not limited to) Blanket Flower (*Gaillardia aristata*), Prairie Coneflower



(*Ratibida columnifera*), Hairy Goldenaster (*Heterotheca villosa*), Sideoats Grama (*Bouteloua gracilis*), and Western Yarrow (*Achillea millefolium*). Boulder County has used this seed in a variety of restoration projects throughout the county, spanning small-scale projects like trailsides seeding or slash pile restoration, to large-scale efforts like flood recovery restoration along the St. Vrain Creek.

Take a walk on the LOBO Trail this spring, or sign up for native seed collection, and see this innovative and productive garden with your own eyes! Peck is, without a doubt, a special place. From June through August you can hear the hum of pollinators tasting the rainbow of the flowers' nectar. Hawks soar in the sky above your head. Friendly passers-by spark up conversation, as they wonder what's happening on the other side of the fence. And as the sun sets behind mountains, you can find a group of volunteers canvassing the rows of plants and filling up their seed collection bags with wide smiles on their faces.



Hairy Golden Aster (*Heterotheca villosa*)



## Volunteer in the Garden

Boulder County Parks and Open Space has established an organic native seed-increase garden to aid our restoration efforts with local plant ecotypes! Members of the public collected all the original seed that was used to establish this garden. Many of these volunteers come back year after year to collect that same seed once it's mature. As well, volunteers are often the ones sowing this seed to restore our public lands in need of a little ecological love.

Volunteers are the heart of this garden, and we are looking for some willing folks to keep this heart beating all season long! Individuals, families, and friends are needed to help keep this special garden clear of weeds, keep a close eye on seed development, and report any needed maintenance. If you think this opportunity is a good fit for you, your family, or someone you know, please submit an application at: [www.BoulderCountyOpenSpace.org/volunteer](http://www.BoulderCountyOpenSpace.org/volunteer).

We hope to see you in the field this season!

# Best Seat in the House: A Picnic on Open Space

by John Reed

The summer picnic is a time-honored way of bringing family and friends together with delicious food and the great outdoors. In the 17th century, the French term “pique un niche” meant “pick a place.” It was an isolated spot (a nook) where family or friends could enjoy a jolly meal together away from distractions and demands.

Boulder County Parks & Open Space has 15 parks that include picnic sites. Most offer picnic tables and restrooms at the trailhead.

Some parks also have group picnic sites that you can reserve for a small fee. The shelters are available on a first come, first served basis if there is no secured reservation. Shelters are perfect for family reunions and special occasions for large groups. Visit [www.BoulderCountyOpenSpace.org](http://www.BoulderCountyOpenSpace.org) to view details about shelter sizes, availability, and other details about group use.

If you are planning a small family outing or romantic picnic for two, check out a few of Boulder County’s lesser known picnic nooks—some with easy access, some secluded, and all waiting for your summer adventures!

## A FEW LOCATIONS TO EXPLORE

**Ethel Harold Trailhead at Walker Ranch:** Fantastic views, a quiet picnic area, and perfectly-sized boulders for young rock scramblers

**Bald Mountain Scenic Area:** Picnic tables near parking lot, short hike to panoramic views of eastern plains and Continental Divide, with a bench at the summit



The best seat in the house—great views and fresh air.

**Caribou Ranch:** Three miles (round trip) to the historical Blue Bird Mine Complex where there is a creek-side bench

**Pella Crossing:** Easy hiking or riding, fishing and birding hotspot, with two picnic tables by the water on western side of park.

**4 Look to the Sky**

Different types of clouds match up with different types of weather. If you saw dark clouds moving towards you, you would know it is about to rain. What is the weather like right now?

CLEAR & SUNNY

Find a nice spot to sit or lie down and look up at the sky. Do you see any clouds above you or moving towards you? Describe how they look (including color, sizes, and shapes).

NO STAIPEY COTTON

**6 MAP ACTIVITY!**

**This House, Your House**

Visit the Lohr House. Some items in the Lohr's kitchen are the same ones that you have in yours, but some are different! List what you have in your kitchen that you don't see in the Lohr's kitchen.

SODA STREAM

FRIDGE

TOASTER

DISHWASHER

FOOD PROCESSOR

**5 Pioneer Life on the Homestead**

When George McIntosh claimed his homestead in 1868, he had to build his log cabin here. Imagine building your own log cabin and draw it here. Don't forget to include the plants, animals, and environment too!

*Draw your log house here!*

## KIDS CAN BE DETECTIVES!

Kids ages 4 to 11 are invited to join the Nature Detectives, an interactive and engaging way to foster children's appreciation of nature.

Joining the club is easy! At nine parks, you'll find a Nature Detectives Mystery Guide to take you on an exploration of that property. Kids do not need any special knowledge or equipment—just curious minds and a sense of adventure. When kids complete and mail in three mystery guides, they'll be sent a prize!

For more details visit [BoulderCounty.org/nature-detectives](http://BoulderCounty.org/nature-detectives)

Participating properties include the Agricultural Heritage Center, Betasso Preserve, Caribou Ranch, Carolyn Holmberg Preserve, Bald Mountain Scenic Area, Walden Ponds Wildlife Habitat, Heil Valley Ranch, Mud Lake Open Space, and Pella Crossing.



# NATURE DETECTIVES

Summer 2019



## Would You Like to Live on the Moon?

The moon would be a convenient place to live if you were an astronomer studying the stars and the planets. As Earthlings, our view of outer space is a little hazy because we view all worlds beyond Earth through our atmosphere. The view of outer space from the moon is much clearer because the moon has practically zero atmosphere.

Moon inhabitants would have an advantage also when blasting off to explore other regions of outer space. Part of the challenge of launching from Earth is escaping Earth's atmosphere and gravity.

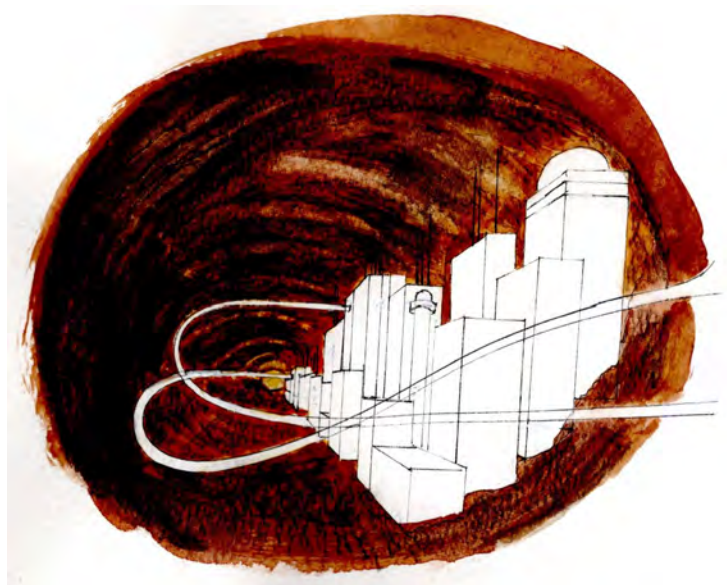
Viewing outer space from moon-based telescopes and getting a boost rocketing off to explore the universe from the moon would be exciting indeed. But the lack of an atmosphere also poses huge problems for humans. No atmosphere means no oxygen. Moon inhabitants would have to provide their own oxygen to breathe.

Without an atmosphere there is no wind or weather on the moon, but wild temperature swings from too hot in the sun to too cold in the shade can vary by 400 degrees! Earth's atmosphere also protects Earthlings from space dust and space rocks that zing around in the universe. These are called **meteoroids**, and moon inhabitants would have to figure out how to avoid getting hurt by them. Radiation from the sun is another hazard to overcome without a protective atmosphere.

## Building a Comfy Moon City

Some scientists are studying the possibility of building a moon city inside a **lava tube**. Lunar lava tubes formed eons ago when volcanos flowed on the moon. A hard, thick crust formed like a roof on some of the lava flows, and when the lava flow stopped and drained away, a deep, empty tube remained.

Researchers are studying a tube that might be big enough to house a whole city. The opening on the moon's surface could have a closeable entry so humans inside might live and work in a safe, oxygenated environment without wearing spacesuits. Inside would be safe from meteoroids too. Maybe one day you'll live there or visit a friend on the moon.





## Moon Facts

At around 239,000 miles away, the moon orbits Earth at a distance 1000 times farther away than the International Space Station's orbit around Earth. The moon is about 400 times smaller than our sun, but it looks nearly the same size in the sky. That's because it is about 400 times closer to us than the sun.

Earth is around four times bigger than the moon. To get an idea of the distance between Earth and the moon and the relative size difference, put a basketball down in a big area. The basketball represents Earth. With a long tape measure, find a spot 23 feet and 9 inches away from the middle of the basketball. Place a tennis ball in that spot to represent the moon. You are now looking at the relationship in size and distance between the moon and Earth.

## The Moon Rocks

Rocks, metals and some trapped gases make up the moon. Water is predicted to be frozen in places too. The moon contains rocks found on Earth, but it also has rocks we don't have on Earth. Hundreds of billions of years ago, when the planets were young, the moon may have been a part of Earth that broke off in a collision between Earth and another planet-sized body.

Gravity pulls us down to Earth and is six times stronger than gravity on the moon. In less gravity, things weigh less. If you weigh 60 pounds, you'd only weigh 10 pounds on the moon.

You could also jump higher and throw balls farther, but without air (atmosphere) you couldn't make a Frisbee fly in a curve on the moon.

With no weather on the moon, there is no erosion from wind or water to blow dust around and roll rocks. Dust particles on the moon have sharp edges and carry a static charge. They stick on everything and would be a big hassle for moon residents.



Moon rock

View of Earth from the moon



Our sky on Earth looks blue and bright because of the way our atmosphere scatters light from the sun.

If you stand in a shady spot on the moon and look away from the sun, you see a dark, black sky even while the sun is lighting the moon's surface.

To read a book about living on the moon, check your library for Max Goes to the Moon: a science adventure with Max the Dog by Jeffrey Bennett.

For more facts on the moon, look up the NASA website [NASA.gov](https://www.nasa.gov) or this page <https://www.nasa.gov/audience/forstudents/index.html>.





## Many Moons Ago

The moon has always fascinated human beings. Over the eons, people observed and studied this brightest object in the night sky. They realized the moon appeared and reappeared in a predictable pattern over time. They named full moons for things that usually occurred during each particular month.

June's full moon was sometimes called *Strawberry Moon*. A full moon in July was named *Thunder Moon* by some and *Hay Moon* by others. *Grain Moon* was in August. Maybe *School's Out Moon* would be a good name for a full moon in May.

You probably know the moon glows because it reflects light from the sun. On a full moon night, moonlight or moonshine (reflected sunlight bouncing off the moon's surface) is bright enough to light your way. On the moon you can see reflected sunlight bouncing off the Earth. It is called earthshine.

## The Moon's Rotation and the Moon's Orbit Take Equal Time

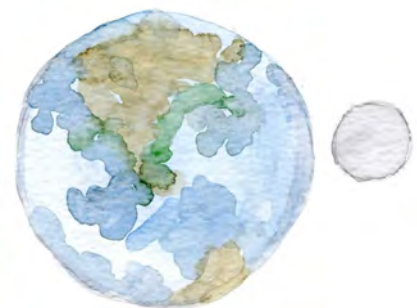
Earth spins around (rotates) in 24 hours. During that 24 hours, people experience day and night every place on Earth, just at different times. (If it is noon in Denver for instance, it is 5:00 the next morning in Sydney, Australia.)

It takes the moon a whole month to rotate. During that month, the moon "day" and moon "night" are much, much longer everywhere on the moon than day and night on Earth. Each "daytime" on the moon is about two weeks long!

The same half of the moon is always facing us. We have photos taken by spacecraft of the half of the moon we can't see from Earth. The far side is always turned away because the moon orbits Earth in the same amount of time as it takes to rotate, about a month.

To get a sense of how this can be, do the following moon/earth activity. Place your basketball "earth" or anything else you want to represent Earth in the center of a room. You pretend to be the moon. Face the "earth" and keep facing it as you circle completely around it. You have rotated and orbited "earth."

Repeat your orbit, and notice that sometimes your back faces one side of the room and sometimes your front faces that same side of the room. Your "moon body" slowly rotated while your "moon body" also orbited your "earth."



Relative sizes of the Earth and the moon

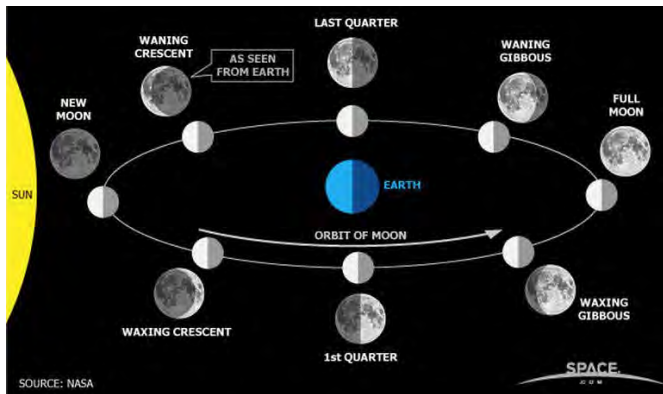


Sherlock Fox says it is fun to study the moon through binoculars. You can see the gray blotches of old lava-filled craters and the light-colored, higher grounds speckled with craters. If you look at the moon around twilight, you see the most details.



## It's Just a Phase

Our moon goes through different phases throughout the month, and this has to do with where it is around the Earth in its orbit. If the moon is between the Earth and the sun, we can't see it because the sun is too bright, and we are only facing the moon during the day (new moon). If the Earth is between the sun and moon, we see the moon at night and the sunlight reflects off the entire side of the moon facing us, so it's big and bright (full moon). The moon is also on a tilted orbit around the Earth so it is usually slightly above or below the earth, which is why we don't have a lunar eclipse every month.



**Waxing** means the light on the moon is getting brighter. (Think about when you put wax candles on your birthday cake—the more candles, the more light!)

**Waning** means decreasing.

Remember this fun saying:

*Light on the right, the moon is getting bright.  
Light on the left rim, the moon is getting dim.*

## Happy Birthday Apollo 11!

On July 20, 2019 it will be exactly 50 years ago that people first set foot on the moon. Astronauts Neil Armstrong and Buzz Aldrin planted the first footprints in moon soil. A third astronaut was with them—Michael Collins. He stayed in the command module while the other two were on the moon so he could pick them up when they left the moon surface. A total of 12 astronauts walked on the moon by the time the Apollo missions ended in 1972.

It took about three days to get to the moon. The astronauts lived in the command module on their journey—kind of a cone-shaped flying office. It was less than 13 feet wide, and all three astronauts lived there together, eating, working, and sleeping in that small space. Measure your bedroom and see how wide it is. Then imagine your furniture, food pantry, work equipment, and two friends sharing that space with you for three days. It's a good way to practice your patience!

To celebrate the progress achieved through human flight, Neil Armstrong took pieces of wood and a piece of fabric from the Wright brothers' original plane with him on Apollo 11. Armstrong and the Wright brothers were all from Ohio.

If you were going on a mission to the moon or to Mars, what would you take with you to represent our path to the future?

## Astronaut on steps of Lunar Lander



Text by Katherine Young and Deborah Price  
Illustrations by Carol Tuttle

# E:bike Pilot Study on Selected Trails

by Tina Nielsen



A park visitor enjoys riding an e-bike at Pella Crossing Open Space

Have you ever been huffing and puffing up a hill on your bike, and suddenly someone sails by pedaling serenely in business attire with seemingly little effort? Chances are you've just seen an e-bike.

Since its beginnings in 1975, Boulder County Parks & Open Space has not allowed motorized uses on its trails. Back in the 1970s, the prohibition on motorized uses served as a benchmark and a clear short hand for distinguishing between desired passive recreational uses and less desirable recreational uses. Motors meant loud, polluting, heavy, and fast machines such as dirt bikes that were not consistent with the vision for recreation on open space. When the Boulder County Comprehensive Plan was adopted in 1978, this idea was baked into the idea of passive recreation, which is defined, in part, as non-motorized (see sidebar).

Fast forward four decades, and electric-assist bikes, or e-bikes, are starting to show up on the roads and trails of Boulder County. Like drones, Pokemon, and geocaching, e-bikes exemplify technological evolution showing up in recreation spaces, creating an opportunity for county staff and park visitors to rethink our definitions and regulations.

Last year, department staff began a process of community engagement to explore the question of whether and where to allow e-bikes on county open space trails. Through open houses, surveys, and public hearings, we discovered that while many people have concerns about safety, speed, and crowding because of e-bikes, many others appreciate the potential for improved accessibility and sustainability by getting people out of their cars. The public engagement process concluded with approval to conduct a year-long pilot through 2019.

## E-BIKE DEFINITION AND CLASSIFICATION IN COLORADO STATE LAW

An electric assisted bicycle (e-bike) is defined as a vehicle having two or three wheels, fully operable pedals, and an electric motor not exceeding 750 watts. Class 1 provides electrical pedal assistance, class 2 provides electrical pedal assistance and power via a throttle; both stop giving power when the e-bike reaches the speed of 20 mph. Class 3 provides pedal assistance up to 28 mph. See <https://leg.colorado.gov/bills/hb17-1151> for full details.

## PASSIVE RECREATION DEFINITION IN BOULDER COUNTY COMPREHENSIVE PLAN

Passive Recreation, referred to in the Open Space Element policies, is defined as non-motorized outdoor recreation with minimal impact on the land, water, or other resources that creates opportunities to be close to nature, enjoy the open space features, and have a high degree of interaction with the natural environment. Further, passive recreation requires no rules of play or installation of equipment or facilities, except for trails and associated improvements. Passive recreation includes activities such as hiking, snowshoeing, cross-country skiing, photography, bird-watching, or other nature observation or study. If specifically designated, passive recreation may include bicycling, horseback riding, dog walking, boating, or fishing.

Note: in the 2017 Open Space Element update, dog walking and boating were added to the definition of passive recreation.

During this pilot period, staff will study the visitor and trail impacts of e-bikes as well as investigate options for updating the definition of passive recreation in the Comprehensive Plan. Research will include a literature review on recreation conflict and e-bike research, questions on a county-wide telephone survey, visitor surveys at select parks and trails, bike speed and volume study, trail evaluation, and survey of new e-bike owners.

The county's e-bike page ([www.BoulderCountyOpenSpace.org/ebikes](http://www.BoulderCountyOpenSpace.org/ebikes)) has all the details about where e-bikes are allowed on Boulder County Parks & Open Space trails, as well as a link to submit your opinions. Research results will be presented to the Planning Commission and Board of Commissioners toward the end of 2019.



# Research on Open Space

*The Boulder County Parks & Open Space Department offers grants for research on county open space lands each year. All proposals are reviewed by a team of resource specialists, and awarded research projects are monitored during their activities on open space. The following is a summary of a 2018 study conducted by Dr. Arathi Seshadri and Janet Hardin at Colorado State University. Their project focused on bringing back flowering plants and pollinators through effective control of invasive winter annual grasses with Esplanade® herbicide.*

## **Executive Summary:**

Invasive species pose one of the largest threats to the biodiversity native to a region, including impacting important pollinator species. Currently the state of Colorado's list of noxious species includes 105 species, 9 of which are grasses. Cheatgrass, or downy brome, is one of the most problematic exotic grass species in the American West, and the most widespread of the Colorado listed species, occurring in every county in the state. Control of invasive grasses has largely depended on grazing, prescribed burning, or use of herbicides such as imazapic, glyphosate and rimsulfuron. However, control is challenged by the dependence of livestock on forage grass species and the nonselective nature of many herbicides. Indaziflam (Esplanade), an herbicide recently approved for use in controlling invasive annual grasses on rangelands and open spaces, shows promise to eliminate or limit spread of those invasive grasses. As invasive species are controlled and eventually eliminated, it is expected that the areas previously occupied by the invasive species will be amenable for growth of flowering forbs and in turn support pollinators that depend on these flora.

To test this, we conducted surveys to observe and record pollinator visitation, flowering forb richness and diversity at 3 sets of paired plots in Boulder County, CO. A preliminary study in 2017

demonstrated an increase in forb cover in plots treated with indaziflam, as well as a greater number of insects visiting flowers in treated plots vs. flowers in control plots. The current study was extended to cover more of the flowering season and expanded to include timed observations on flowering plants that were not on the standard transects. One plot in each pair had been treated with indaziflam while the other served as an untreated control. Timed observations were conducted along transects covering the entire plot. Our results in the 2018 study concurred with the results in the preliminary 2017 study. Interestingly, while they did occur in the plots, bees and butterflies were not recorded as frequently during the timed observations as were visitors from other insect orders, notably hemipterans. In order to obtain a good idea of the pollinator diversity in the area, it would be necessary to conduct destructive sampling using blue vane traps or net sampling.

Our study aimed to minimize removal and killing of insects and hence we relied on visual observations of pollinators at flowers which was restricted to the periods of observations during the study. Many of the forbs reported in our study are dependent on pollinators for successful reproduction. Further study of seed and fruit production of the native flora in the plots will provide conclusive evidence for the activity of pollinators. Improved fruit and seed production in native flora imply better reseeding potential and increased success of restoration in these reclaimed areas. Application of Esplanade could thus pave the way to restore native biodiversity. The results of our study demonstrate some of the positive impacts of Esplanade on the restoration of flowering plants. These analyses of floral resources will help describe the benefits of Esplanade application in supporting and sustaining pollinator diversity in Boulder County.

*To read the full report, or other funded research, visit [www.BoulderCountyOpenSpace.org/research](http://www.BoulderCountyOpenSpace.org/research)*



## DISCOVER BOULDER COUNTY

# Calendar of Events

### SEEING OURSELVES THROUGH THE EYES OF NATURE

**Saturday June 8, 9:30 a.m.-noon**

**Near Boulder. Meeting location provided to those registered**

Join volunteer naturalist Linda Weber for a contemplative walk in nature. You will be introduced to ways to experience nature's rhythms and learn more about the ways of earth and sky. Wear comfortable clothing and bring a notebook and pen. For ages 16 and up with an accompanying adult.

Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).

### JUNIOR RANGER ADVENTURES: SUMMER KICKOFF EVENT

**Saturday June 8, 11 a.m.-1 p.m.**

**Betasso Preserve, located off Sugarloaf Road at 377 Betasso Road Space is limited. Registration required.**

Kick off the summer at Junior Ranger Boot Camp! Experience what it's like to be a Boulder County Park Ranger by learning about wildland fire, search and rescue, medical air evacuations, and wildlife hazing. For kids ages 5-12, but all family members are welcome. Children must be accompanied by an adult. Bring water, snacks, sunscreen, and hiking shoes. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).

### FOOTHILLS WILDFLOWER HIKE

**Sunday June 9, 10 a.m.-noon**

**Near Boulder. Meeting location provided to those registered**

Join volunteer naturalists for a spring wildflower hike in the beautiful foothills. We will hike about 1.5-miles through forest and meadows in search of spring wildflowers, and enjoy views of the snowy high country. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).



### I SPY CRITTER CLUES!

**Monday June 10, 10-11:30 a.m.**

**Meeting location provided to those registered**

Help volunteer naturalists search for evidence of who lives in the wild. We'll look for tracks, scat, nests, bones, and antlers of some of the animals that live here. For ages 4-10 with an accompanying adult. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).

### INATURALIST FOR TEENS

**Wednesday June 12, 10 a.m.-noon**

**Near Louisville. Location provided to registered participants.**

Youth ages 10-18 and interested parents will take a short hike on the Coal Creek Trail to practice observing nature, and to learn how to use the iNaturalist app to capture what you see. Discover how to be part of the Boulder County Wildlife project on iNaturalist. Prizes awarded June 18. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).

### WILDFLOWERS OF BOULDER COUNTY SLIDE PROGRAM

**Thursday June 13, 7-8:30 p.m.**

**Louisville Public Library, 951 Spruce Street, Louisville**

Join volunteer naturalists for a slide program to kick off the summer wildflower season! You'll learn about the variety of wildflowers from the plains to the alpine tundra, where and when to look for them, and some interesting facts about our native plants.

### FISH HAWKS OF BOULDER COUNTY

**Saturday June 15, 10:30 a.m.-noon**

**Cattail Pond, Boulder County Fairgrounds, north entrance off Boston Avenue, Longmont**

Join volunteer naturalists for this drop-in program to learn about osprey. An osprey pair has nested at Cattail Pond for several years, and we may see adults and young looking for food and trying out new wings. Bring a bird field guide and binoculars if you have them.

### CELEBRATE SUMMER HIKE

**Sunday June 16, 10 a.m.-noon**

**Meeting location provided to those registered**

Join volunteer naturalists to celebrate the coming of summer! On this easy 1.5 mile hike we will explore the natural history of the area including wildflowers, wildlife, and forest ecology. We will also talk about summer weather patterns and safety in the mountains. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).



### Barnyard Critter Day

**Sunday June 23, 10 a.m.-3 p.m.**

**Agricultural Heritage Center**

**8348 Highway 66, between Lyons and Longmont**

Learn about the roles of chickens, pigs, horses, and other animals on a farm. See demonstrations of sheep herding and horseshoeing, visit with chickens and pigs, and ride on a horse-drawn wagon. Please leave pets at home so working animals will not be disturbed.

For more information, call 303-776-8688 or email [jdrew@bouldercounty.org](mailto:jdrew@bouldercounty.org).



## Heritage Day & Night

Walker Ranch Homestead, 8999 Flagstaff Mountain Road, approximately 7 miles west of Boulder

At both events attendees can visit with costumed volunteers as they demonstrate late 1800s rural games and chores such as doing laundry the old-fashioned way, woodworking, meal preparation, and blacksmithing and participate in chores and games. For more information, please call 303-776-8848 or email [skippen@bouldercounty.org](mailto:skippen@bouldercounty.org).

If you like, bring a picnic (please bring a blanket).

### SUMMER HERITAGE MORNING: WORLD'S FAIR

Sunday June 9, 10 a.m.-1 p.m.

Long ago, new inventions, technology, and products were introduced to the public at the World's Fair. Come up to the homestead to learn what everyday brands and new items had their start at the World's Fair in 1893.

### SUMMER HERITAGE EVENING: LIVESTOCK

Saturday July 27, 4-7 p.m.

Meet animals up close at the petting zoo and learn about the animals on Walker Ranch long ago and others raised locally. Become a team of horses or oxen and design your own brand.

### DRAGONS & DAMSELS SLIDE PROGRAM

Wednesday June 26, 6-7:30 p.m.

Lafayette Public Library, 775 west Baseline Road, Lafayette

Join volunteer naturalist Leslie Larson and learn about the amazing life of dragonflies and their damselfly cousins, including their acrobatic flying, huge multi-faceted eyes, convoluted mating schemes, and behavioral quirks.

### DRAGONS & DAMSELS IN THE FIELD

Saturday June 29, 10 a.m.-noon

Meeting location provided to those registered.

Join volunteer naturalist Leslie Larson and other naturalists to learn about the amazing life of dragonflies and their damselfly cousins. We'll talk about their acrobatic flying, huge multi-faceted eyes, mating schemes, and quirks. Also pick up some clues to help with field identification. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).

### NATURE DETECTIVES IN THE FIELD: MOON MYSTERIES

Tuesday July 9, 2-3 p.m.

Louisville Public Library, 951 Spruce Street. Registration required.

Celebrate the 50th anniversary of the first human moon landing and increase your knowledge of our favorite night light! Take part in hands-on demonstrations and discover other fascinating moon facts. For children ages 6-16 accompanied by an adult, but anyone is welcome. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).



## Catfish Nights



June 14 & July 19

7:30 - 11 p.m.

Stearns Lake at Carolyn Holmberg Preserve (access trailhead from Dillon Road on South 104th Street)

Bring your family and friends and enjoy a summer night fishing at the lake! Anglers must have a current Colorado fishing license. Kids under 16 don't need a license.

- Open to shore fishing only
- Artificial and live bait permitted
- Check-in required at trailhead on South 104th Street

For more information, please call 303-678-6204.

**Event will not be canceled due to weather**

### HISTORY AND HABITAT OF CARIBOU RANCH

Saturday July 13, 9 a.m.-noon

Caribou Ranch Open Space, 2 miles north of Nederland on County Road 126

Escape the summer heat and explore beautiful forests, meadows, and wetlands! Volunteer naturalists will be stationed along the trails to answer questions and help you learn about the geology, wildflowers, wildlife, and colorful history of this diverse landscape.

### A BUTTERFLY'S LIFE SLIDE PROGRAM

Monday July 15, 6-7:30 p.m.

George Reynolds Branch Library, 3595 Table Mesa Drive, Boulder

Join volunteer naturalists for a beginner's guide to our local butterflies. This slide program will review the life cycle of butterflies and cover basic information on behavior, host plants, and identification.

## Fun on the Farm

The first and third Fridays of each month

Agricultural Heritage Center, 8348 Highway 66, Longmont

Bring your 3-6 year olds to the farm to learn about animals, plants, and agricultural life. Programs include a short story time, hands-on activities, and a take-home craft. Afterwards, explore the farm. Children must be accompanied by an adult.

### Horsin' Around

Friday June 14, 9:30-10:15 a.m.

Friday June 28, 10:30-11:15 a.m.

### Pioneer Life

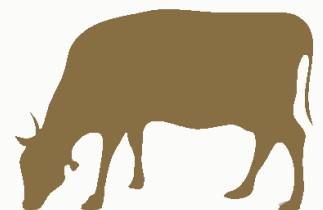
Friday July 12, 9:30-10:15 a.m.

Friday July 26, 10:30-11:15 a.m.

### Cow-a-Palooza

Friday August 9, 9:30-10:15 a.m.

Friday August 23, 10:30-11:15 a.m.



## NATURE DETECTIVES: MOON MYSTERIES NIGHT WALK

Tuesday July 16, 8:30-10:30 p.m.

Near Superior. Location provided to registered participants.

Increase your knowledge of our favorite night light! Enjoy a moonlit walk while discovering fascinating facts about the moon. For families with children ages 6-16, but anyone is welcome. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).

## BUTTERFLIES AND OTHER FLYING CREATURES

Sunday July 21, 9:30 a.m.-noon

Near Nederland. Meeting location provided to those registered.

Volunteer naturalist Jan Chu and others will lead this slow-paced 2-mile hike in search of mid-summer butterflies, birds, and other flying insects. We'll talk about butterfly behavior and life cycles, and learn some tips on identification. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).



## HOW DARK IS YOUR SKY?

Wednesday July 24, 6:30-8:30 p.m.

Louisville Public Library, 951 Spruce Street. Registration required.

Boulder County has participated in a dark sky study the last four years in collaboration with other Front Range agencies. Learn about what Boulder County is doing to protect dark skies, where the darkest places are, and what you can do to promote dark sky health for all. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).

## BACKYARD WILDLIFE AT SANDSTONE RANCH

Saturday July 27, 10:30 a.m.-noon

The Visitor Center is located south of Highway 119, one mile east of Weld County Road 1. Take the east entrance to the Sandstone Ranch area, turning south on Sandstone Drive. Follow signs to the Upper Visitor Center parking lot.

Join volunteer naturalists for a hands-on program to learn about the animals that call your backyard home. After the program visit the beautiful, historic ranch house to learn about the human history associated with this site. Children must be accompanied by an adult.

## GIVE ME THAT OLD TIME MUSIC

Saturday August 3, 5-7 p.m.

Walker Ranch Homestead, 8999 Flagstaff Mountain Road, approximately seven miles west of Boulder

Join our musicians for some fun, foot stompin' tunes. Bring a blanket and picnic, and sing or dance along. Bring your own instruments and be part of the band.

## Astronomy Programs

### DROP-IN ASTRONOMY: SEE THE STARS!

Saturday June 8, 8:30-10:30 p.m.

Near Lyons. Location provided to those registered.

### HARRY POTTER STAR STORIES

Thursday June 27, 2-3 p.m.

Louisville Public Library, 951 Spruce Street. Registration required.

Learn the origin and fun facts of your favorite characters' names. For families with children ages 6-16, but anyone is welcome.

### THE MOON AND MORE

Saturday July 6, 8-10:30 p.m.

Meeting location provided to those registered.

Discover fun facts about our nearest companion in space. This program is family friendly.

### WALK IN THE LUNAR LIGHT

Sunday July 14, 8:30-10:30 p.m.

Near Boulder. Location provided to registered participants.

Enjoy a walk under the light of the moon.

### IT'S RAINING METEORS!

Saturday August 10, 8-10:30 p.m.

Near Lyons. Meeting location provided to those registered.

Discover fun facts about these streaking lights across the sky at a brief program followed by viewing the night sky. Program is family friendly.

### HARRY POTTER STAR STORIES AFTER DARK

Friday August 16, 8-10 p.m.

Near Superior. Location provided to registered participants.

Learn fun facts about your favorite characters' names. For families with children ages 6-16, but anyone is welcome.

### TO REGISTER FOR ALL PROGRAMS VISIT:

[www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register)

## COBBLES OF TIME—HIGH COUNTRY GEOLOGY

Saturday August 17, 9 a.m.-1 p.m.

Near Nederland. Location provided to registered participants.

Join volunteer naturalist Roger Myers and others on this 4.5-mile moderate hike to learn about Glacial Lake Devlin, its catastrophic demise, and the dramatic landscape it left behind.

Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).

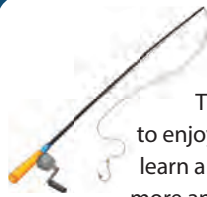


## LIVING IN LION AND BEAR COUNTRY

**Saturday August 24, 9-11 a.m.**

**Near Boulder. Location provided to registered participants.**

Join volunteer naturalists for a moderate 1.5-mile hike and learn about the ecology and behavior of our local mountain lions and black bears. We'll talk about why the foothills are such good habitat for these animals and how we can be safe in lion and bear country. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register).



## Kids Gone Fishing

These clinics are a fun way to for kids 5 to 15 to enjoy fishing. Participants go through stations to learn about casting, baiting a hook, fish handling, and more and then get to practice their new skills. This is a great opportunity for both kids who have never fished and those who want to learn more about fishing.

Clinics take place from 9 a.m.-noon

**Saturday June 8, Boulder County Fairgrounds (Cattail Pond)**

**Saturday August 10, Carolyn Holmberg Preserve (Stearns Lake)**

**To sign up, visit:**

[www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register)

**Got questions?** Contact Michelle Marotti at [mmarotti@bouldercounty.org](mailto:mmarotti@bouldercounty.org)

## Nature Hikes for Seniors

Join volunteer naturalists for a moderate hike to explore and learn about the unique geology, history, plants, and wildlife of these beautiful properties. No registration is necessary.

### FOOTHILLS HIKE

**Thursday June 27, 10 a.m.-noon**

Heil Valley Ranch, north of Boulder off Lefthand Canyon Drive. Meet at the picnic shelter near the Lichen Loop Trailhead.

### HIGH COUNTRY HIKE

**Thursday July 25, 10 a.m.-noon**

Caribou Ranch Open Space, 2 miles north of Nederland on County Road 126. Meet at the trailhead.

### PONDEROSA PINE HIKE

**Thursday August 29, 10 a.m.-noon**

Betasso Preserve. Boulder Canyon (Highway 119) to Sugarloaf Road, follow signs to Betasso Preserve and meet at the picnic shelter.

## Summer Mining Programs

### HARD ROCK MINING VAN TOURS

**Thursday July 18, 5 p.m.-8 p.m.**

**Sunday August 18, 9:30 a.m.-12:30 p.m.**

**Meeting location provided to registered participants**

Tap into the towns, tools, and characters of our hard rock mining heritage by visiting mining sites of years gone by. Tours are open to ages 10 and older with accompanying adult. Some walking required. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register) or call 303-258-7332.

### AN EVENING AT THE MUSEUM

**Enjoy coffee and dessert as you explore mountain lore.**

Nederland Mining Museum, 200 N. Bridge St., Nederland

**Friday July 12, 7-8 :30 p.m.**

Family event: Geosphere 1889 Children role play as historical adventurers to solve a rock-related mystery ahead of their evil nemesis, Baron von Vaderstein. Space is limited; register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register)

**Friday August 9, 7-8:30 p.m.**

Silvia Pettem's Cornwall to Caribou: discover the social history, rise and fall of this silver mining town, especially regarding its early residents from Cornwall, England.

### GOLD PANNING

**Saturday July 6, noon-2 p.m.**

**Saturday August 24, noon-2 p.m.**

Nederland Mining Museum, 200 N. Bridge Street, Nederland

Try your hand at gold panning! This activity led to the settlement of Boulder County as people sought their fortunes. Do you have what it takes to travel back in time and search for gold? Programs are open to ages 5 and older. Registration required. Register at [www.BoulderCountyOpenSpace.org/register](http://www.BoulderCountyOpenSpace.org/register)

**All Programs:** All ages welcome unless otherwise noted. NO PETS PLEASE! Be prepared for cool to high temperatures and afternoon thunderstorms. Bring water and dress in layers. For information about these programs, or to arrange a private program, please call 303-678-6214.



## Summer Night Hikes

Join volunteer naturalists to hike about one mile round-trip on an easy trail, enjoy the starlight, listen for night sounds, and learn about nocturnal habits of the critters that live here. Bring water, closed-toe hiking shoes and a flashlight.

**Space is limited, meeting locations provided to those registered.**

Register at [www.bouldercountyopenspace.org/register](http://www.bouldercountyopenspace.org/register).

### Foothills Night Hike

Thursday June 20, 8:30-10:30 p.m.

### High Country Night Hike

Tuesday July 23, 8-10 p.m.

## Native Plant Master Nature Journaling and Sketching

Do you want to document your trips into natural areas and deepen your observation skills? In this class you will learn basic sketching and journaling techniques. You don't have to be an artist to take this class.

**Wednesday June 19, 6-8 p.m.** at Roosevelt Park (flowers)

**Wednesday July 10, 5:30-7:30 p.m.** at Natural Resources Bldg., Fairgrounds (mammals)

**Wednesday August 14, 6-8 p.m.** at Natural Resources Bldg., Fairgrounds (insects)

We also offer plant identification classes and plant walks. Visit <https://boulder.extension.colostate.edu/gardening-horticulture-native-plants-community-garden/native-plant-master/>

## Land through the Lens Exhibit

### A Juried Photography Show Celebrating our County-owned Public Lands

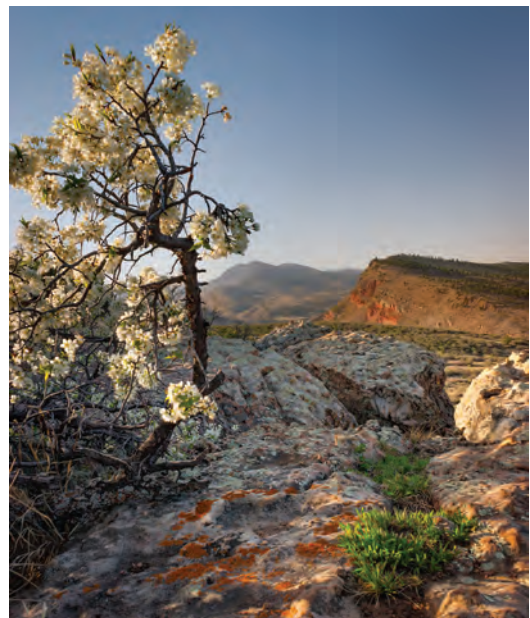
Please join us for the opening of the department's fourth juried photography exhibit. Over 90 beautiful images featuring flora, fauna and stunning landscapes will be on display, and delicious appetizers will be generously provided by Guillaume's European Catering.

**Reception:** Friday August 9, from 5-8 p.m. at The Great Frame Up Longmont, 430 Main Street.

**Exhibit days:** August 9 - September 6.

**Gallery hours:** Monday - Saturday from 10 a.m.-5 p.m.

**For more information** please visit [www.BoulderCountyOpenSpace.org/photoshow](http://www.BoulderCountyOpenSpace.org/photoshow) or contact Karen Imbierowicz at [kimbierowicz@bouldercounty.org](mailto:kimbierowicz@bouldercounty.org) or 303-678-6268.



Bryan Harding, Ron Stewart Preserve at Rabbit Mountain

## Fun at the Boulder County Fair

The Boulder County Fair, with its deep historic roots, is the oldest fair in the state of Colorado. Started by a group of prominent ranchers and farmers, the first fair in the Colorado Territory was held in October 1869.

The Boulder County Fair is still going strong, focusing on family-oriented activities and events, our agricultural heritage and tradition, and showcasing the outstanding work and projects of its 4-H and FFA youth and the community at large.

The fair begins Friday, August 2 and runs through Sunday, August 11. There are no entrance or parking fees. The Fairgrounds will be open 10 a.m. to 10 p.m. daily. The Fair Garden and Outdoor Arena and Carnival hours vary depending on the particular day's events and entertainment. More information about events can be found at [www.bouldercountyfair.org](http://www.bouldercountyfair.org).



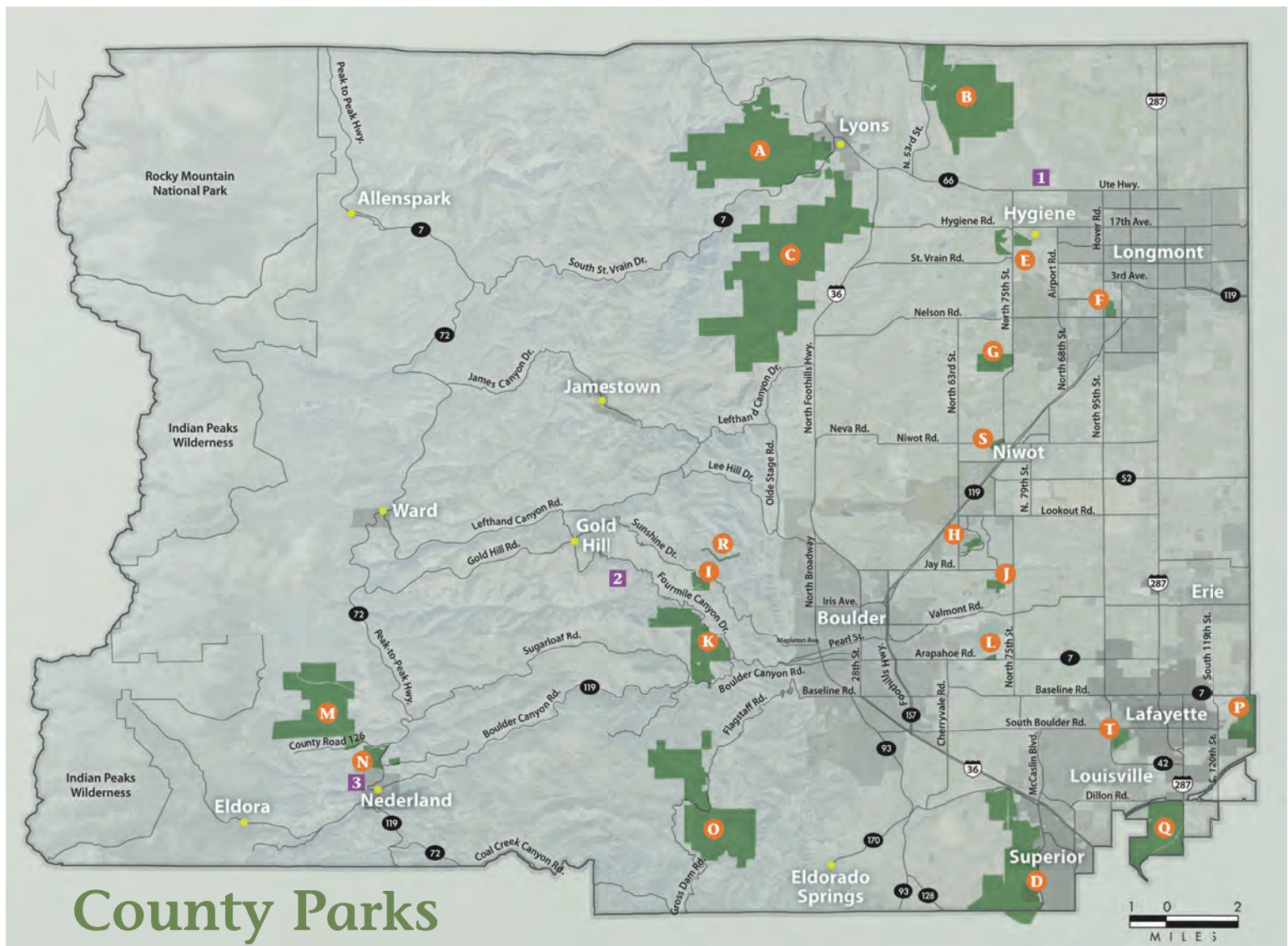




## Parks & Open Space

5201 St. Vrain Road, Longmont, CO 80503

[www.BoulderCountyOpenSpace.org](http://www.BoulderCountyOpenSpace.org)



## County Parks

- |  |   |   |   |
|--|---|---|---|
| <b>A</b> Hall Ranch                              | <b>F</b> Boulder County Fairgrounds     | <b>L</b> Legion Park                                  | <b>R</b> Anne U. White (closed due to 2013 flood) |
| <b>B</b> Ron Stewart Preserve at Rabbit Mountain | <b>G</b> Lagerman Agricultural Preserve | <b>M</b> Caribou Ranch                                | <b>S</b> Dodd Lake                                |
| <b>C</b> Heil Valley Ranch                       | <b>H</b> Twin Lakes                     | <b>N</b> Mud Lake                                     | <b>T</b> Harney Lastoka                           |
| <b>D</b> Coalton Trailhead                       | <b>I</b> Bald Mountain Scenic Area      | <b>O</b> Walker Ranch                                 | <b>1</b> Agricultural Heritage Center             |
| <b>E</b> Pella Crossing                          | <b>J</b> Walden Ponds Wildlife Habitat  | <b>P</b> Flagg Park                                   | <b>2</b> James F. Bailey Assay Office Museum      |
|  | <b>K</b> Betasso Preserve               | <b>Q</b> Carolyn Holmberg Preserve at Rock Creek Farm | <b>3</b> Nederland Mining Museum                  |